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BEST MANAGEMENT PRACTICES FOR MECHANICAL REPAIR FACILITIES

Best management practices can be thought of as using “good housekeeping” practices. Listed below are several procedures to operate your facility and minimize the risk of contamination to the environment.

1. A waste oil and waste fluid collection area must be set up. This area must have a bermed impervious surface and also be under cover. Wastes are to be stored in clearly marked containers that are in good condition. Leaking containers must be replaced. Strippers, chlorinated solvents and flammable solvents must be kept separately. Antifreeze/coolant must also be stored separately. All waste must be segregated. Therefore, no mixing of waste streams should be done.
 - a. Waste oil is to be recycled and taken by a permitted waste oil hauler.
 - b. Chlorinated solvents, strippers or flammable solvents must be recycled by a permitted solvent recycler or disposed of as hazardous waste. This waste must be shipped by a permitted hazardous waste hauler to an approved EPA treatment or disposal facility.
 - c. Antifreeze must be collected and shipped by an approved hauler or recycled using a certified recycling unit.
 - d. Used oil filters must be collected and handled by a permitted hauler or recycler. All fluids must be drained from filters prior to disposal. These filters cannot be disposed of in the trash dumpster unless a hazardous waste profile indicates otherwise and approval is granted from this department. Oil filters can be drained and crushed and sold to an approved metal recycler (the ones that are able to handle the filter).
 - e. Refrigerants must be collected with an approved refrigerant recovery machine. Facility must have at least one (1) person certified to use the machine.
2. Receipts and/or manifests for all waste generated on site must be kept at your facility for a minimum of three (3) years and made available for review by DERM.

3. Engines must be stored on an impervious surface and undercover due to potential leaks from filters and fluids inside the engine. All used parts with oil and/or grease must also be stored on an impervious surface. All fluids should be removed from all gas tanks, transmission, crankcases, oil filters, etc. prior to crushing or storing. Small parts can be drained of all fluids and disposed in the dumpster. All work should be done undercover in an impervious surface.
4. Small oil spill may be cleaned with absorbent pads that can be reused several times.
5. Steam cleaning, pressure cleaning and/or parts washing may not be done over open ground.
 - a. Parts washing must be done in a container or parts washer. The parts can be rinsed or air-dried over the parts cleaning container. Absolutely no fluid, not even rinse water is to be disposed of to open ground, storm drains, septic tanks or any drainage structure. Research has shown that this rinse water contains solvent, metals, oil and grease. Dirty parts washing fluid may be recycled or disposed properly as previously discussed above. A permitted parts washer contractor who brings new fluid and takes away the sludge and dirty fluid is the preferred disposal method.
 - b. Steam cleaning and/or pressure cleaning must be done in an area designed to collect and contain the cleaning effluent. The system may recycle, collect or treat the effluent.
 1. If detergents or solvents are not used, an oil/water separator connected to sanitary sewer, with proper maintenance, will usually allow effluent to meet sewer standards.
 2. If detergents or solvents are not used, the oil and grease are emulsified and the separator would no longer function properly. In these cases, treatment or recycling systems must be used. If the treated water meets sewer standards, it can be discharged to the sewer; or for existing facilities on septic tank, it can be hauled to a sewage treatment plant by a permitted septic tank hauler. **No industrial waste may be discharged into septic tank.**

*****PLANS FOR STEAM CLEANING AND/OR PRESSURE CLEANING SYSTEMS MUST BE SUBMITTED TO DERM FOR APPROVAL BEFORE CONSTRUCTION**

6. Tires may be hauled away by a permitted hauler to an approved facility. Single dump permit letters and coupons for facilities that regularly dispose of tires may

be obtained from Miami Dade County Department of Solid Waste management (594-1500).

7. Special attention should be paid to storm drain locations (also known as storm sewers). Storm drains are designed to help alleviate rainwater build up. These drains are not connected to the sanitary sewer system but rather assist in allowing the rainwater to drain into the ground and groundwater. Therefore, industrial discharges should not be allowed to drain into these storm drains. Areas near storm drains must be kept free of oil, grease and other contaminants so that rainwater does not wash these materials into the storm drains.
8. Used lead-acid batteries must be sent to a recycler. Batteries must be stored on concrete or other impervious surface and under cover until shipment.
9. Do not discharge used coolant, test tank or flush out waters into septic tanks, storm drains, sanitary sewers, soakage pits or onto the ground surface.
 - a. Most test tank waters, boil out tank sludge, and associated wash and rinsewaters are considered hazardous waste when dirty, due high metal concentrations. Test tank water and rinsewaters must be treated, recycled or collected.
 1. If a treatment system is used, the treated effluent may be discharged into sanitary sewer if it meets sewer standards. The remaining sludge may have to be disposed of as hazardous.
 2. A recycling system may be used to filter the test tank water to be reused as clean test tank water. The filter may have to be disposed of as hazardous.
 3. If the test tank water is neither recycled nor treated, it must be collected. It may then be tested to determine proper disposal. If this water meets sewer standards it may be disposed of via sanitary sewer. If the facility is on septic tank and the waste meets sewer standards, it may be taken by an approved septic tank hauler. If the test tank water is hazardous, it must be disposed of by an approved transporter.
 4. The boil out tank sludge must be properly handled as a hazardous waste.
9. Rags used during mechanical repairs or cleaning processes which become contaminated with waste oil or hazardous materials such as solvents, ink, etc. are considered hazardous wastes and may be handled by an approved rag service or an approved hazardous waste transporter. Used rags must not be disposed of in

the trash/dumpster unless a hazardous waste profile indicates otherwise and approval is granted by this department.

10. Facilities that perform AC repair must have equipment to recapture and/or recycle the refrigerant. Said equipment requirements are as follow:
 - EPA or UL listed and approved
 - able to recover at least 80%-90% of refrigerant
 - refrigerant storage containers DOT or UL approved
 - for servicing low pressure equipment the unit must be able to pull a vacuum of at least 29" Hg.

****In all aforementioned situations where the waste is deemed to be hazardous, a permitted hazardous waste transporter must be used to transport the waste to a federally approved hazardous waste disposal facility. Hazardous waste manifest must be maintained at your facility. The facility generating the waste is required to obtain an Environmental Protection Agency identification number, unless classified as a conditionally exempt generator, by contacting:

Bureau of Waste Planning and Regulation
Florida Dept. of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(904) 488-4805

11. Storage

1. Facilities storing large amounts of chemicals or fuels are required to provide secondary containment for all storage areas. This containment area should be able to hold 110% of the largest single tank to be stored in this area. Secondary containment guidelines are available upon request. Plans must be submitted to this department and written approval obtained before construction.
2. In large storage areas, there must be aisle space between storage products. This will enable inspection of the container for leaks and/or corrosion. Incompatible chemicals or materials should be stored separately.

Pollution Prevention Suggestion

The reduction or elimination, at the source, of discharges or emissions to the environment.

1. Waste fluids should be segregated and kept separately. This prevents mixing incompatible substances and prevents contamination of a non-hazardous waste

by a hazardous waste. This also allows them each to be recycled or disposed of appropriately and reduce disposal costs.

2. Recycling of waste fluids is a preferred option. This can either be done on-site or shipped to an approved recycler off-site. Filtering units to restore coolant are available. (Installation of such units must be approved by DERM and the Fire Dept.)
3. For small to medium facilities, it may be more economical to have a parts washer contractor replenish the parts cleaners and remove the spent solution, than to install a solvent recycling still.
4. Large facilities, on-site solvent recycling stills are usually very economical with payback periods of only 2-3- years.
5. Alternative cleaners are available (e.g. special water based cleaners) that replaces traditional solvent. These can be used in a variety of system including dip tanks, power washers with jet sprays, or ultrasonic immersion tanks.
6. Parts cleaning can be in 3 stages
 1. Preclean to remove heavier dirt (e.g. with a wire brush)
 2. Sink #1 as an initial sink to do heavier cleaning. Recycled only after full use.
 3. Sink #2 as a final sink for precision cleaning (used as make-up for sink #1).
7. Parts can be removed slowly from solvent sinks and allowed to sit a few minutes on "dip racks" which drain back to the sink. Rolldown covers that are kept closed when not in use can be used on the sink. Sludges should be removed often and properly disposed, but the solution itself can be used many times.
8. Stop leaks quickly. Drip pans can be placed to catch leaks. Spot mopping with a bucket (and proper disposal of the water) can be performed. Floor cleaning machines are available that will spray a cleaning solution, scrub with brushed, and vacuum up the solution (to be disposed off properly). Absorbent pads are available that allow the oil to be squeezed out into a waste oil drum. The pads can be reused several times.
9. Brake parts should be recycled and/or sent to the manufacturer for relining when possible.
10. Tires may be recapped for reuse.
11. Scrap parts can be sold to metal recyclers.

All mechanical repair facilities are required to obtain an Annual Pollution Control Operating Permit.

Questions will be answered by the Industrial Facilities Section staff at (305)372-6600.
Any question concerning pollution prevention please call the Pollution Prevention
Program at (305)372-6784.